

REMARKS

I. Introduction

In response to the Office Action dated May 5, 2006, claim 11 has been amended. Claims 1, 2, 4-7, 9-12, 14, and 15 remain in the application. Re-examination and re-consideration of the application, as amended, is requested.

II. Claim Amendments

Applicants' attorney has made amendments to the claims as indicated above. These amendments were made solely for the purpose of clarifying the language of the claims, and were not required for patentability or to distinguish the claims over the prior art.

III. Double Patenting Rejection

In paragraphs (5)-(6) of the Office Action, claims 1-15 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5 and 7-8 of co-pending Application No. 09/939,813 respectively.

Applicants' attorney notes the provisional nature of this rejection, and will respond substantively upon an receipt of an indication of otherwise allowable claims.

IV. Statutory Subject Matter Rejections

In paragraph (4) of the Office Action, claims 11, 14 and 15 were rejected under 35 U.S.C. §101 as being non-statutory.

Applicants' attorney has amended claim 11 to overcome this rejection.

However, should issues still remain in this regard, Applicants' attorney requests that the Examiner indicate how the rejection can be overcome, in accordance with the directives of the Examination Guidelines for Computer-Related Inventions. See Guidelines II M.P.E.P. § 2106. Specifically, should it be necessary, the Applicants' attorney requests that the Examiner identify features of the invention that would render the claimed subject matter statutory if recited in the claim. See Guidelines IV, M.P.E.P. § 2106.

V. Prior Art Rejections

A. The Office Action Rejections

In paragraphs (5)-(6) of the Office Action, claims 1, 2, 4-7, 9-12, 14 and 15 were rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,208,345 (Sheard) in view of U.S. Patent No. 5,485,615 (Wennmyr).

Applicants' attorney respectfully traverses these rejections.

B. The Applicants' Independent Claims

Independent claims 1, 6 and 11 are generally directed to developing multi-tier business applications. The computer-implemented system of claim 1 is representative, and comprises an Integrated Development Environment (IDE), executed by a computer, for creating and maintaining a multi-tier business application on a multiple tier computer network, wherein the IDE includes a Topological Multi-Tier Business Application Composer that is used by a developer to graphically create and maintain the multi-tier business application, a Meta-model that captures and persistently stores information entered via the Composer, and an Interactive Agent that monitors the Meta-model for an occurrence of an event that comprises a possible non-optimization in a portion of the multi-tier business application based upon an heuristic analysis of information gathered by the Composer and stored within the Meta-model, wherein the Interactive Agent operates from a knowledge base stored as a part of the Meta-model, and the knowledge base is structured in such a way that the occurrence of the event causes the Interactive Agent to access the knowledge base to identify context information comprising a list of suggested and recommended actions for the event, in order to trigger a display of a graphical element including the context information in the Composer to interact with the developer.

C. The Sheard Reference

Sheard discloses a visual data integration system architecture and methodology. The system architecture includes a transport framework that represents a technology-independent integration mechanism that facilitates the exchange of technology-dependent data between disparate applications. A visual interface facilitates the design, deployment, and runtime monitoring of an integrated information system implementation. An integrated information system is developed visually through use of the visual interface by dragging and dropping components within a canvas area of the interface. The components are graphical representations of various telecommunications

hardware and software elements, such as information stores, processors, input/output devices and the like. Various components may be packaged together as business extension modules that provide specific business integration capabilities. Interconnections between components are graphically established using a mouse to define sources and destinations of specified data. An underlying configuration/runtime information framework operating above and in concert with the transport framework effectively transforms the graphical interconnections into logical or physical interconnections, which results in the contemporaneous generation of an integrated runtime system. Format neutral data meta-models are employed to model the input and output data requirements of disparate systems and system components so as to remove any cross-dependencies that exist between the systems and technologies implicated in a data integration project. The visual interface enables runtime control and analysis of the business information and system aspects of an integrated system implementation. Visual views onto the live deployment provide consistent management and control for system integrators, business integrators, system managers, and business managers using a single visual interface.

D. The Wennmyr Reference

Wennmyr describes a method and system which assists a user in the achievement of a task according to a set of procedures such as those used in the design of software products. A functional description of the process of designing the software is instantiated by the system whereupon the system provides the user with a series of choices relating to the software development. The choices selected, in turn, permit a variety of system tools, each operating in parallel and concurrently, to be used in the development of the software. The system automatically monitors and checks the process during any manipulation and provides error analysis as well as suggested courses of action to the user. The system provides flexible support without requiring the user to follow a rigid development pattern.

E. The Applicants' Invention is Patentable Over the References

The Applicants' invention, as recited in independent claims 1, 6 and 11, is patentable over the references, because it contains limitations not taught by the references.

Applicants' independent claims recite a Topological Multi-Tier Business Application Composer that is used by a developer to graphically create and maintain the multi-tier business application, a Meta-model that captures and persistently stores information entered via the

Composer, and an Interactive Agent that monitors the Meta-model for an occurrence of an event that comprises a possible non-optimization in a portion of the multi-tier business application based upon an heuristic analysis of information gathered by the Composer and stored within the Meta-model, wherein the Interactive Agent operates from a knowledge base stored as a part of the Meta-model, and the knowledge base is structured in such a way that the occurrence of the event causes the Interactive Agent to access the knowledge base to identify context information comprising a list of suggested and recommended actions for the event, in order to trigger a display of a graphical element including the context information in the Composer to interact with the developer.

Sheard discloses a visual data integration system architecture and methodology, wherein an integrated information system is developed visually through use of the visual interface by dragging and dropping components within a canvas area of the interface. The components are graphical representations of various telecommunications hardware and software elements, such as information stores, processors, input/output devices and the like.

However, the Office Action admits that Sheard fails to provide explicit details regarding an Interactive Agent that operates from a knowledge base stored as a part of the Meta-model, wherein the knowledge base is structured in such a way that the occurrence of the event causes the Interactive Agent to access the knowledge base to identify context information comprising a list of suggested and recommended actions for the event,

Nonetheless, the Office Action cites Wennmyr as disclosing these elements of Applicants' claims.

However, Wennmyr requires that a software process be defined in a process description language (PDL), which is then converted into a form executable by an interpreter. In Wennmyr, it is only during the execution by the interpreter of the converted PDL that a menu of choices is generated, wherein the choices comprise suggestions regarding possible actions relevant to the specified software process, the user selects one of the choices, and one of a group of system tools is executed in response.

Applicants' attorney notes that Sheard says nothing about the execution of a converted PDL in an interpreter. Consequently, the method of generating suggestions in Wennmyr would not work in Sheard, because there is no mechanism in Sheard for a converted PDL to be executed by an interpreter. Therefore, Applicants' attorney submits that Sheard and Wennmyr cannot be properly combined in the manner suggested by the Office Action.

Thus, the combination of Sheard and Winnmyr does not anticipate or render obvious Applicants' claimed invention. Moreover, the various elements of Applicants' claimed invention together provide operational advantages over the combination of Sheard and Winnmyr. In addition, Applicants' invention solves problems not recognized by the combination of Sheard and Winnmyr.

Applicants' attorney submits that independent claims 1, 6 and 11 are allowable over the combination of Sheard and Winnmyr. Further, dependent claims 2, 4-5, 7, 9-10, 12 and 14-15 are submitted to be allowable over the combination of Sheard and Winnmyr in the same manner, because they are dependent on independent claims 1, 6, and 11, respectively, and thus contain all the limitations of the independent claims. In addition, dependent claims 2, 4-5, 7, 9-10, 12 and 14-15 recite additional novel elements not shown by the combination of Sheard and Winnmyr.

VI. Conclusion

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.


Respectfully submitted,

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